Comparisons of Job Characteristics

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Computers and Electronics	8.4	22.8	22.6	0	Current knowledge level may be sufficient
Mathematics	9.2	18.3	16.5	<	Expanded education and/or training may be required
Education and Training	9.2	16.8	21.7	>>	Current knowledge level is likely more than sufficient
English Language	11.2	16.6	18.2	0	Current knowledge level may be sufficient
Engineering and Technology	5.7	12.0	11.5	0	Current knowledge level may be sufficient
Telecommunications	3.9	11.9	11.7	0	Current knowledge level may be sufficient
Design	5.2	11.4	7.7	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 64

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Systems Evaluation	6.4	14.7	9.2	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	13.6	10.7	<<	Extensive development of skills in this area may be required
Programming	2.2	12.4	5.8	<<	Extensive development of skills in this area may be required
Time Management	8.9	12.2	11.9	0	Current skill level may be sufficient

Mathematics	6.2	11.3	8.4	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	10.6	7.6	<<	Extensive development of skills in this area may be required
Technology Design	2.6	10.0	1.6	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	7.8	2.4	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 89

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Deductive Reasoning	10.6	14.6	14.5	0	Current ability level may be sufficient
Inductive Reasoning	10.2	14.1	13.5	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.9	10.5	<<	Extensive improvement in abilities may be required
Fluency of Ideas	7.6	12.8	8.7	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	12.6	12.1	0	Current ability level may be sufficient
Category Flexibility	9.0	12.4	9.7	<	Some improvement in abilities may be required
Originality	7.6	11.0	9.3	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	10.8	9.1	<	Some improvement in abilities may be required
Number Facility	6.3	9.8	6.1	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 98

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Work Activities	Exclusivity of Activity
Advise governmental or industrial personnel	28
Direct and coordinate scientific research or investigative studies	27
Explain complex mathematical information	30
Follow data security procedures	77
Follow data storage procedures	75

Program mainframe computer	84
Resolve symbolic formulations in data processing applications	89
Use computer application flow charts	84
Use computer networking technology	81
Use computer programming language	82
Use differential equations in computer programming	95
Use geographical information system (GIS) software	72
Use knowledge of mainframe computers	78
Use mathematical or statistical methods to identify or analyze problems	30
Use object-oriented computer programming techniques	85
Use oral or written communication techniques	1
Use public speaking techniques	13
Use relational database software	26
Use structural analysis techniques to analyze computer systems	89
Write research or project grant proposals	33
Write scholarly or technical research papers	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: n/a

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Tools and Technologies	Exclusivity
Tools and technology data is unavailable for one or both occupations.	

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.